

The Race for Absolute Zero

From Part 2 of “Absolute Zero” on NOVA. Can be viewed on YouTube.

Watch the video to fill in the following details:

1. James Dewar and Heike Onnes raced each other to liquefy what element? Which scientist succeeded and how did he do it?
2. How did Dewar and Onnes differ from each other in their working styles?
3. The study of very cold materials led to unexpected discoveries....superconductivity and superfluids. Explain superconductivity and superfluids.
4. How did Albert Einstein contribute to the study of very cold materials?
5. What is a Bose-Einstein condensate and what is unusual about it?
6. How did one scientist slow down the speed of light?
7. How far down the temperature scale towards absolute zero have scientists traveled?
8. What are quantum computers, and what do they have to do with the very cold?
9. Why is reaching absolute zero probably not possible?

10.